A COMPARISON OF TEACHER AND PARENT EXPECTATIONS FOR LEARNING DISABLED AND NORMAL ELEMENTARY SCHOOL CHILDREN IN SELECTED NEWFOUNDLAND ELEMENTARY SCHOOLS

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A COMPARISON OF TEACHER AND PARENT EXPECTATIONS FOR LEARNING DISABLED AND NORMAL ELEMENTARY SCHOOL CHILDREN IN SELECTED NEWFOUNDLAND ELEMENTARY SCHOOLS

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Abstract

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Summary

This study was undertaken to investigate teacher and parent expectations for achievement of middle-class learning disabled boys as compared with a control group of middle-class boys of similar age, grade and potential for achievement. The learning disabled children had been diagnosed at the Learning Center, Memorial University and recommendations for the remediation of their specific learning problems had been made to their teachers. Although these children had not completed their remedial instruction at the time of the study, teachers and parents were informed that these children should achieve at a level congruent with their intellectual ability once they overcame their disabilities with special training.

Teachers and parents of learning disabled and control group children were asked to complete a questionnaire designed to measure long- and short-term expectations for achievement. The number of subjects for whom both parents and teachers returned usable questionnaires were 30 out of 54 for the Learning Disabled Group and 33 out of 51 for the Control Group. Three of the control subjects were dropped because of non-average IQ ratings. From the rating scales included on the questionnaire, eight variables were selected to represent rated past achievement, rated potential and expectations for the present grade, and future success in reading and other academic subjects. It was observed that learning disabled children were rated significantly lower than control children by both parents and teachers for all of these variables. For all subjects parent ratings were higher than teacher ratings except for potential ability for reading achievement. For the other variables, parent and teacher ratings were similar for control children but teachers rated learning disabled children significantly lower than did parents. On the basis of these results, it was argued that teachers' and parents' attitudes regarding a learning disabled child's potential for academic success should be changed. Areas in which subsequent research would be valuable were suggested.

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Chapter 1

INTRODUCTION

In recent years a great deal of research in education has been focused on the problems of educating children who have difficulty learning in school in spite of the fact that they are average or above average in intellectual ability (Lerner, 1971; Myers and Hammill, 1969; Thompson, 1966). Many variables have been investigated in an attempt to discover causes and methods for overcoming the educational problems of these learning disabled children. Numerous theories and methods for diagnosis and remediation of learning disabilities have been tested and applied, with varying degrees of success, to educational settings.

Ideally, it is felt that a learning disabled child can be expected to achieve at the same level as a child of normal intellectual ability if he receives remedial help based on an adequate diagnosis (Critchley, 1964; Thompson, 1966; Novak, 1971). In fact, it has been discovered that the frustration which develops from the negative experience of not being able to learn can alter a child's prognosis. His learning problem becomes complicated by emotional and adjustment problems

The longer the learning disabled child's problem is ignored, the longer he will feel that he is a failure as a student. Eventually, out of sheer frustration, he will give up trying. At this stage remedial help is ineffective until his attitude towards learning is changed to a positive one again (Lerner, 1971; Myers and Hammill, 1969; Hunter and Johnson, 1971). Research has shown that the problem of educating a learning disabled child is one of giving appropriate remediation at the appropriate time, which would be as early as possible in the child's school career. Under these conditions many feel sure that the educational prognosis for a learning disabled child would be the same as for a normal child of similar intellectual ability (Critchley, 1964; Lerner, 1971; Myers and Hammill, 1969; Novak, 1971; Rice, 1971; Thompson, 1966).

One area of psychological and educational research which has not yet been investigated with regard to learning disabled children is the expectancy phenomenon. Several studies have been made in recent years to confirm what is now known as the "Rosenthal effect" (Brophy and Good, 1972). This is the tendency for pupils to conform to a teacher's expectations for him. This phenomenon is of particular interest in the study of learning disabled children since they will, by

definition, have had a poor academic record in their early years of school. Yet they have the potential to achieve at their grade level once they have overcome their difficulty through appropriate remedial help. That is, if a learning disabled child is receiving special remedial instruction for his particular disability, his teachers and parents should have the same expectations for this child as for a normal child of similar intellectual ability.

Statement of Purpose. The purpose of this study is to determine whether or not teachers and parents have different long-term and short-term expectations for learning disabled children than they do for normal children of similar age, grade, and intellectual ability. By definition, children with learning disabilities are of average intellectual ability. Therefore, expectations for a learning disabled child should be similar to expectations for children whose achievement is at a level typical of children in his particular grade.

Significance of the Study. Children with learning disabilities have the intellectual ability to achieve at their grade level. However, they are unable to learn by the teaching method generally used in the

classroom. With special educational programs designed for their particular needs, their prognosis is the same as for a normal child of similar intellectual ability (Lerner, 1971; Myers and Hammill, 1969; Thompson, 1966). Therefore, in a situation where such individual educational programs are available for these children, teachers and parents should have the same expectations for learning disabled children as they do for normal children.

In recent years a new term has evolved in psychological and educational literature. That is the "Rosenthal effect", which is the name given to the phenomenon of people conforming to the expectancies that other people have for them. It is now an accepted fact that a child's academic performance can be affected by teacher expectations. Children's IQ's have been known to increase when teachers were told that they were "late-bloomers." In this same study, children whose parents were very interested in their achievement showed the greatest IQ gains (Rosenthal, 1968). If teachers and parents have different expectations for a learning disabled child than for a normal child, he will probably never achieve at his potential. The area of teacher and parent expectancies is an important consideration in

maximizing the benefit for each child who is receiving this special help for the remediation of his problem.

In May, 1971 the Learning Center, at Memorial University, offered to the schools of St. John's, Newfoundland, their first services for children with learning disabilities. It's purpose is to provide a psychological diagnosis and make recommendations for an educational program suited to the needs of a particular learning disabled child. Suggestions are made to the child's teacher as to how she can help the child overcome his disability. Exercises designed to build skills in the child's area of weakness are usually included in the report that is given to the teacher. Follow-up services are also provided for these children. Both in the report and in the visits to schools, the fact that these children are of average intellectual ability and are capable of learning at an average rate is emphasized.

In September, 1972, a special educational program was set up for learning disabled children at Vanier Elementary School in St. John's. Two special "catch-up" year classes provide learning disabled children in Grades Three and Four with remedial help

in small classes where the teacher has more time for individual instruction. Classes similar to these had been in operation for three years. The Grade One and Two children attend regular classes but receive special help on an individual basis by a resource teacher who works with each child for approximately one-half hour every other day. This class is a pilot project by the Avalon Consolidated School Board for the 1972-73 school year. These classes are financed under the provision set up by the Provincial Department of Education for Special Education Classes.

Individual programs based on the diagnosis of each child's particular disability were developed for children who were to receive this special help. While the program was in its first few months of operation, a meeting was held for the parents of the children involved in this program to explain the nature of learning disabilities and the special help their children were receiving. It was stressed in this meeting that these children had average intellectual ability and, once they overcame their disability with special help, they would achieve at the level expected for average children.

A second level of remedial services for learning disabled children is found in other schools in St. John's,

which are not as well equipped as Vanier Elementary School. The amount of individual help the learning disabled children in these schools get depends on how much time their teachers are willing and able to spend with them on a one-to-one basis. Unfortunately, the average size of a regular classroom in St. John's is forty children. However, the feedback obtained from follow-up of these children shows that most teachers are trying to spend time with the learning disabled child in their class and many have indicated that the child has improved.

If our schools are investing time and money helping learning disabled children achieve their potential, it seems necessary that we should consider investigating as many variables as possible which may effect the child's achievement. Since it is known that expectations of parents and teachers can change a child's achievement, (Rosenthal, 1968) differences between expectations for normal and learning disabled children should be studied.

The results of this study will have significance for the improvement of services which are presently available for learning disabled children and for future services in St. John's. Both parents and teachers should be aware that

learning disabled children have the same potential as normal children of similar intellectual ability.

The services now offered for learning disabled children at Vanier Elementary School will not be exclusive to that school for very much longer. Soon other schools in the city will be using these classes as models for their own. In view of this, a comparison of teacher and parent expectations for long- and short-term achievement of learning disabled children receiving remedial help at the two levels previously discussed seems to have significance.

Hypotheses. The following null hypotheses were tested for each of the dependent variables used in this study:

1. There will be no difference between the rated expectations of learning disabled and control children.
2. There will be no difference between the ratings of expectations made by teacher and parent groups.
3. There will be no interaction between parent and teacher rated expectations for learning disabled and control children.

Definitions.

1. Expectations. Expressed opinion of a person's achievement at some future date. This was measured

by means of a questionnaire. (See Appendix A).

2. Learning Disabled Child. "A learning disability refers to one or more significant deficits in essential learning processes requiring special educational techniques for its remediation. Children with learning disabilities generally demonstrate a discrepancy between expected and actual achievement in one or more areas, such as spoken or written language, mathematics, and spatial orientation. The learning disability referred to is not primarily the result of sensory, motor, intellectual, or emotional handicap, or lack of opportunity to learn. Deficits are to be defined in terms of accepted diagnostic procedures in education and psychology. Essential learning processes are those currently referred to in behavioral science as perception, integration, and expression, either verbal or non-verbal. Special education techniques for remediation require educational planning based on the diagnostic procedures and findings" (Lerner, 1971, p. 298). This definition is based on the one provided by the National Advisory Committee on Handicapped Children, U.S. Department of Health, Education and Welfare, 1968.

For the purpose of this study a learning disabled child is operationally defined as a child

who is of average intellectual ability but who is achieving at least two years below his present grade level in one or more subjects.

3. Long-term expectations. Expressed opinion of the educational and vocational goals that a particular child will attain.

4. Middle-class. Middle-class status was attributed to children whose fathers were employed in occupations that were rated above 40.00 on the Blishen scale (Blishen, 1967). According to the 1961 Canadian census figures, 27% of the labour force in Newfoundland was employed in occupations rated above 40.00.

5. Normal Child. A child whose intellectual ability falls within the average range for his age level and who is achieving at the level expected of a child of his age and intellectual ability.

6. Short-term expectations. Expressed opinion of the academic achievements of a particular child at the end of the 1972 - 1973 school year.

Limitations of the Study.

1. This study is limited to male students from Grades 2 to 5 who are from middle-income families.

2. The results of this study are limited to a description of the significance of hypothesized relationships. No conclusive interpretation can be

made about the causes and effects of the relationship being studied.

3. The use of a questionnaire poses limitations on the study. The care with which each teacher and parent responded to it, the mental attitude of the respondent, and the respondent's understanding of the questions are factors that could not be controlled. There is no way of knowing whether or not the reported expectations are the true expectations of the respondent. The return rate of the questionnaire also limits the conclusions that can be drawn from the study. The reasons why questionnaires were not returned cannot be determined and may be related in some way to the nature of the variables being investigated.

Chapter 2

REVIEW OF THE LITERATURE

Expectancy Phenomenon. The concept of the "self-fulfilling prophecy" is not new in psychological literature. A great deal of research has been conducted to support the theory that if a person expects a certain event to occur, then this expectation changes that person's behavior in such a way as to make the expected event more likely to happen. Jastrow (1900), in his book Fact and Fable in Psychology, writes about the athlete who was so afraid of performing poorly that he became incoordinated and did fail. In more recent years, interpersonal self-fulfilling prophecies have become the subject of a considerable amount of psychological research. "One person's expectation for another person's behavior can quite unwittingly become a more accurate prediction simply for its having been made" (Rosenthal, 1968, p. vii). This interpersonal expectancy phenomenon was first researched by Rosenthal (1966) and is commonly referred to as the "Rosenthal effect."

Rosenthal has reviewed the literature

pertaining to the expectancy phenomenon up to 1971 (Rosenthal, 1971). The story of Clever Hans is an example from animal psychology which he cites most frequently (Rosenthal, 1966, 1968, 1971). Hans was a horse who belonged to a German mathematics teacher. This horse could, by tapping his foot, add, subtract, multiply and divide. There was no evidence that Hans' owner was profiting from this horse's talent or that he was giving the horse cues to which he could respond. Two psychologists, Pfunst and Stumpf, tried to find out how Hans was able to perform these tasks. They discovered that any person who was questioning Hans would signal the horse when to begin and stop tapping his foot. The questioner would lean forward, raise his eyebrow or make some signal that would indicate to Hans that he expected him to begin tapping his foot. As Hans approached the correct number of taps, the questioner would make some motion which would let the horse know that he was expected to stop tapping. Hans' behavior was caused by the questioner's expectation for that behavior.

Further evidence of the effect which experimenters have on their subjects in animal studies is seen in further experiments described by Rosenthal (Rosenthal, 1971). In 1963, Rosenthal and Fode conducted an experiment with rats to study experimenter

effects on animal behavior. Student experimenters were to train rats to run the dark arm of a T-maze which had interchangeable arms. Half of the twelve experimenters were told that their rats were maze-bright while the remaining six were told that their rats were maze-dull. From the first day onward, the rats that were believed to be better performers became better performers. Burnham (1966) had twenty-three experimenters each run a rat in a T-maze discrimination problem. About half the rats had parts of their brain removed and the rest had only sham surgery. Each rat was labeled lesioned or non-lesioned. Some were falsely labeled while others were correctly labeled. The animals that had been lesioned did not perform as well as those that had not been lesioned, and the animals that were believed to be lesioned did not perform as well as those that had not been lesioned. This experiment is very interesting in that the effects of the experimenter's expectancy were greater than the effects of the removal of brain tissue.

If a person's expectations are able to affect the behavior of an animal, then it seems quite probable that one would see the same kind of phenomenon with human beings as subjects. This is, in fact, the case. For a very simple example, one can turn to the

field of medicine. When a new drug comes on the market it is usually at its most effective. Beecher (1966, cited by Rosenthal, 1968) studied the effects of placebo as compared with morphine in the control of pain. The placebo had the same effect as the morphine if neither the patient nor the person who administered the pain killer knew whether or not the morphine or the placebo had been administered.

Rosenthal and Fode (1963, cited in Rosenthal, 1971) used ten advanced psychology students as experimenters in a study of expectancy phenomenon with human subjects. Each experimenter was to show a series of ten photographs of people's faces to each of his twenty subjects. Each subject was asked to rate each photograph on a success-failure scale (-10 to +10). The photographs were selected so that the facial expressions showed neither success nor failure. Half of the experimenters were told that the photographs were usually rated as successful (ratings of +5), while the other half were told that the photographs were usually rated as failures (ratings of -5). All experimenters gave the same instructions to their subjects. The results showed that the experimenters who expected higher ratings obtained higher ratings than did the experimenters who expected lower ratings. Support for Rosenthal's

study came from an experiment by Cooper, Eisenberg, Robert, and Dohrenwend (cited in Rosenthal, 1971). They compared the effects of experimenter expectancy with the effects of preparation for an examination. Ten experimenters each had ten subjects. Half of the subjects were told to memorize a list of 16 symbols for an exam that had a 50-50 chance of taking place (High-effort group). Half were told only to look over the symbols (Low-effort group). Half of the experimenters were led to expect that the High-effort group were prepared for the test, while half were led to expect that the Low-effort group was prepared for the test. It was found that the effects of the experimenters' expectancies were more than ten times greater than the effects of preparing for the test.

Rosenthal's first interest in the expectancy phenomenon had been in relation to experimenter effects on behavioral research. Once he had proven the existance of this "Rosenthal effect" in his experiments with both animal and human subjects, and these findings had been supported by similar studies of other researchers, Rosenthal became interested in this effect as it relates to the relationship between pupil and teacher. If an experimenter can unintentionally affect the behavior of his subjects through his expectancies of their behavior, then it makes sense

that pupils' behaviors are affected by teacher expectations. This was found to be so in a study by Rosenthal and Jacobson (1968). The study, which forms the core of their book Pygmalion in the Classroom, is known as the Oak School Experiment.

Oak School is an elementary school in a lower socio-economic status neighbourhood. All of the children in this school were administered a non-verbal intelligence test. The teachers were told that this was a test which would identify intellectual "bloomers". Twenty percent of the children in each class from grades one to six were chosen randomly to become the experimental group or "late-bloomers". Above average, below average and average children were included in this group. The teachers were told that these "late-bloomers" would improve considerably in intellectual development by the end of the school year. There was, in fact, no difference between the experimental and control groups at the beginning of the experiment except that the teachers were told that the experimental group were "late-bloomers". At the end of the year, the same intellectual test was readministered to all of the children in the school. The results of this experiment showed that the children for whom the teachers had expected greater gains, did show such gains in grades one and three.

The gains were not significantly different in grades three to six. The children were retested again after the second year of being identified as "late-bloomers" and the greatest gains were made by the pupils who had originally been identified in grade five.

The "late-bloomers" were also rated regarding classroom behavior. In the opinion of the teachers, these children were better adjusted, happier, had a better chance of success in later life. This finding was most striking in the first grade. The children who were not designated as "late-bloomers" and who also increased in intellectual score, were less favourably rated. In the slow track, however, even if intellectual gains were expected, the child was rated unfavourably. In fact, the more he gained, the less favourably he was rated. The children of the medium track showed the greatest benefits from favourable teacher expectations.

The only subject in which there was a significant difference between grade-point gains made by "late-bloomers" and the experimental group was reading (Rosenthal and Jacobson, 1968). The "late-bloomers" showed the greater gain. This finding is interesting when one considers that reading is the subject which causes most failure and frustration in school. Younger children showed the greatest expectancy

advantage in reading.

The fact that children who were expected to gain did gain cannot be accounted for by the amount of time spent with each child. Teachers reported that they did not spend extra time with the "late-bloomers". Also, the other children showed some intellectual gains as well. The teachers did not seem to talk to these children more than the others since greater gains were made on the reasoning half of the test, not on the picture vocabulary half of the test. It seems that more subtle interpersonal reactions must have taken place between teacher and "late-bloomer", such as tone of voice, facial expressions, etc. (Rosenthal and Jacobson, 1968).

If children can make such improvements through a change in teacher attitudes without a change in teacher methods as shown in this study by Rosenthal and Jacobson, then the implications for education are numerous. Teacher selection and placement should be given more importance than it is at present since the interpersonal relationship between pupil and teacher seems to have a considerable effect on pupil learning.

The results of the Oak School experiment were almost uncritically accepted when it first appeared in print. Later came the negative reactions to Rosenthal's research on the expectancy effect. Barber and Silver (1968) critically analyzed 31 studies

which were used to demonstrate experimenter bias. Some of these studies were conducted by Rosenthal while some were done by other experimenters. Their argument was that proper experimental controls or statistical analyses were not used and 19 of these 31 studies do not support Rosenthal's thesis. Rosenthal responded to each point made by Barber and Silver, and defended the conclusions drawn from the statistical analyses in all 31 of these studies (Rosenthal, 1968). The studies referred to were concerned only with experimenter bias, not with Rosenthal's work in the area of teacher expectations.

Elashoff and Snow (1971) criticized the validity of the Rosenthal-Jacobson Oak School Experiment in their book Pygmalion Reconsidered: A Case Study in Statistical Inference. Again, Rosenthal defended his research procedures, methods, and conclusions (Rosenthal and Rubin, 1971). In their response to the Elashoff and Snow criticisms, Rosenthal and Rubin show that the original Rosenthal-Jacobson results of data analysis are consistent with the Elashoff and Snow analysis and both show a significant effect of teacher expectations. The Oak School Experiment was shown to have used successful randomization with equivalent Experimental and Control groups at the start of the study. The third point made was

that several experiments conducted by numerous researchers indicated positive effects of favourable interpersonal expectations, so the Rosenthal-Jacobson study cannot be considered a "fluke". Rosenthal and Rubin conclude their argument with the statement that "in the main the numerous criticisms advanced in E S (Elashoff and Snow) were neither sound nor constructive."

Several studies using Rosenthal's design of manipulating teacher expectations have revealed mixed or negative results. Brophy and Good (1972) reviewed some of these studies. The differences in the results of replicated studies seems to be caused by differences in the experimental conditions. Negative results have been obtained when research conditions lasted for the whole school year and general achievement tests were used. Studies which support Rosenthal's results involved very little contact with teachers and used more specific criterion-related tests. Two studies by Shrank (1970) reveal more information about manipulation of teacher expectations. Pupils were randomly assigned to five groups. Teachers were told that the pupils were assigned to these groups on the basis of their ability and that the groups were ranked from high to low. The mean achievement of these groups ranked in the same order as the randomly assigned labels. The study was repeated but this

time teachers were told that pupils were randomly assigned to these groups and were asked to teach as though the groups were assigned by ability. This time there were no differences between the mean achievement of the five groups. The problems with studies that manipulate expectations is that when negative results are found, it cannot be concluded that pupil performance is not affected by teacher expectations. The negative results could have been caused by the failure of the treatment to induce the desired teacher expectations.

By far, most of the studies in the literature concerning expectancy phenomenon is in support of Rosenthal's findings. From an analysis of 59 studies of experimenter expectancy effects, 70% of the experimenters gave or obtained responses in the direction of the experimenter's expectancy. For seven studies of teacher expectancy effect, 67% of the teachers changed pupil behavior through their expectancies for a particular pupil (Rosenthal, 1971--table 5).

In a study of 14 institutionalized adolescent female offenders, Meichenbaum, Bowers and Ross (1969) found that changed teacher expectancy resulted in more appropriate classroom behavior and improved academic performance on objective examinations. In this study teacher behaviors were observed and an increase in

positive interaction or a decrease in negative interaction was noted between the teacher and designated students.

Burnham (1968) found that teacher expectations also affected pupil performance in swimming. At the beginning of the lessons, none of the children could swim. The camp staff was told that one half of the group had excellent swimming potential. These children were chosen at random. At the end of the course, all children were tested on the Red Cross Beginner test. The children who were expected to perform better did show greater swimming ability than the Control Group children (cited in Rosenthal, 1971).

Some studies have investigated effects of already existing teacher expectations. Palardy (1969) studied the effects of teachers' beliefs concerning probable success of first-grade boys in learning to read. The teachers were asked to predict the percentage of success that Grade One boys would achieve in learning to read if the average Grade One girl achieved 80 percent success. On the basis of the answers to this question, teachers were assigned to two groups--those who thought boys would be at least as successful as girls (Group A), and those who thought boys would be less successful than girls (Group B). Reading tests were administered to boy

and girl pupils of teachers in both groups. It was found that boys who were in classes where teachers had lower expectations for them than for girls did achieve at a significantly lower level than boys who were in classes where the teachers thought there were no differences between boys and girls. Boys achieved lower than girls in classes with Group B teachers. No significant differences were found in the reading achievement of boys and girls with Group A teachers.

Brophy and Good (1972) had teachers rank their pupils according to expected achievement. Then their behavior towards the three high and three low pupils was observed. The high's were permitted more time to respond to questions than low's, and high's received more praise for correct answers. Rowe (cited in Brophy and Good, 1972) found the same results in her study. She then trained teachers to wait for low ranked children to respond and found that these children began to speak up more often. In some cases teacher expectations for these lower pupils were raised.

These studies indicate very strongly that the "Rosenthal effect" is a significant force in a classroom situation. This recently discovered phenomenon has considerable implications for the education of our children. The currently popular method of teaching

for individual differences and proceeding at one's own rate may need further investigation since it has been demonstrated that "individual differences" can change with a change in teacher expectancies for that pupil. "As teacher training institutions begin to teach the possibility that teachers' expectations of their pupils' performance may serve as self-fulfilling prophecies, there may be a new expectancy created...that children can learn more than believed possible" (Rosenthal, 1968, p. 182).

Very little research has been conducted in the area of the effects of parental expectations on the academic performance of children. In view of the effect of the expectancies of less significant persons in a child's life (eg. experimenters) have on a child's performance, it seems probable that the expectations of parents would also have some effect on a child's performances. Hunter (1971) refers to parental expectations when comparing differences between readers and non-readers. She found that significantly more children who were not first-born children were in the disabled group. She considers the possibility that higher parental expectations for the first-born child motivate the child toward fulfillment of those expectations. Rosenthal and Jacobson (1968) noted that among the children who showed the greatest gains in IQ were those for whom their parents showed some

interest.

Learning Disabilities. By definition, learning disabled children have the intellectual ability to achieve at least average grades in school. However, because of some "deficit in essential learning processes" they are unable to achieve at the level which would be predicted by their level of intelligence. Their achievement in one or more subject areas is below average for their age. The prognosis for a learning disabled child is extremely good if the child is given appropriate help based on adequate diagnosis at an early age (Ontario Association for Children with Learning Disabilities, 1964). Once the child has completed his special educational program, he should be able to achieve at the level generally expected of a child of his intellectual ability.

There are several theories about the causes of learning disabilities with diagnostic and remedial programs based on these theories. Myers and Hammill (1969) summarize several of these theories and remedial methods. Kephart of Purdue University has devised a widely used set of exercises designed to improve the child's body image, motor co-ordination and laterality awareness. Marianne Frostig's program is designed to train visual perceptual skills which she feels are

prerequisite for learning school-related skills, particularly reading and writing. Other theorists support language development programs, phonics systems, and multi-sensory methods. Stott (1970) has developed a program for remedial reading which is composed of a number of letter and word games. These games are very simple and since they are programmed materials, the constant presence of a teacher is not necessary. Stott's program is a phonics approach to remedial reading.

Educational kits have been developed for training skills in specific areas. For example, if a child has a visual perceptual deficit, there are ready-made programs to fit that teaching program; if he has an auditory perceptual deficit, other kits for teaching this kind of child are available. All of these theories and programs have been laboratory tested and most of the manuals give case studies illustrating the success of a particular program. Ideally, after training in the area of this deficit, a child should be able to return to a regular classroom and achieve at his expected level.

One example of such a case study is the story of J.L. who was a behavior problem in school and showed signs of a learning disability (cited in Myers and Hammill, 1969). Diagnostic testing revealed that

she was of low average intellectual ability with poor development of visual-motor skills. Following this evaluation, J.L. received training for eleven months, mainly using techniques suggested by Kephart and Getman to improve her motor skills and visual-motor coordination. Two years after this training she was back in a regular class, achieving at her expected rate.

In a special publication of the Woman's Section of the Baltimore Evening Sun, Novak (1971) writes about the problems of being unable to learn to read. She cites two case studies of young men who, in spite of not being able to read, did manage to get a college education. The key to their success was to have books recorded so that they could learn by listening rather than by reading.

There are numerous cases of eminent men who are known to have had some learning disability. Thompson (1971), in his review of the literature tells of Thomas Edison who was diagnosed by his teacher as mentally ill and withdrawn from school. His mother became his teacher. Letters written later in life indicate that his written syntax and spelling skills were at a very low level. Harvey Cushing, the eminent brain surgeon, was unable to spell. Auguste Rodin was

unable to learn at all in school, although as an adult he did learn to read and write. He was called ineducable by his uncle. George S. Patton IV had a definite language disability. He was unable to read at 12 years old and never learned to read well. Paul Ehrlich, the German bacteriologist, was very poor at composition. His thesis for his degree in medicine was written in someone else's handwriting with some notes in his own hand in the margins in which he used no capital letters. Critchley (1964) gives strong evidence that Hans Christian Anderson and the son of Napoleon III were both dyslexics.

In summary, from the evidence cited, it seems reasonable to conclude that children with learning disabilities are able to learn as well as normal children if their particular deficits are remediated or if programs can be built around avoidance of tasks which require the use of skills they do not have, as in the case of the boys who taped books and learned by listening rather than reading (Novak, 1971). There are several examples of learning disabled men who have attained a high level of education and became professionals, such as doctors or lawyers (Critchley, 1964). In addition, Thompson (1971) gives numerous examples of very famous men who succeeded in spite

of their learning disability.

Although learning disabled children have the potential to achieve at the same level as other children of their intellectual ability, they are unable to do so under the regular teaching method (Lerner, 1971; Meyers and Hammill, 1969; Thompson, 1966). They need a special educational program designed to take advantage of their abilities, and to improve and build skills in the area of their particular disability. However, when these children are in regular classes, they are often considered to be "a bit dim or just not trying" (Thompson, 1971). The teacher and parents eventually come to expect less and less of the child in terms of academic success as he continues to have difficulty with his school work. The child then, according to the research on the expectancy phenomenon, conforms to these low expectations.

It is estimated that eight to twelve percent of the children in Canada have an emotional or learning disorder that will prevent them from achieving at their potential unless some intervention takes place (Celdic Report, 1969). In recent years there has been an increase in the number of services available for these children. The problem of teacher and parent expectations for learning disabled children

is critical in the situation where these children were receiving appropriate help for their problem. Because of a previous poor academic record, will teachers and parents have lower expectations for a learning disabled child than they will for a normal child of similar intellectual ability? If so, it seems probable that the learning disabled child will conform to these lower expectations and will never have the chance to reach his potential level of achievement. This study attempts to answer this question.

Chapter 3

METHODOLOGY OF THE STUDY

Sampling. A questionnaire which was designed to measure rated past achievement and rated expectations for present and future school achievement was sent to teachers and parents of all middle-class male students of ten years of age and under. These children were diagnosed as learning disabled at the Learning Center, Memorial University. Socio-economic status was determined by the father's occupation. The Experimental Groups for this study were composed of the total sample of this population for whom both teacher and parent returned a completed questionnaire.

The majority of the population, thirty-two of a total of fifty-four, were enrolled at Vanier Elementary School, a modern school situated in a middle-class area of St. John's, Newfoundland. These children formed the population for Experimental Group 1.

The children at Vanier Elementary School were receiving special help for their particular learning problem, based on the diagnosis made at the Learning

Center. This help consists of, in the case of Grade Two pupils, training by a resource teacher in a one-to-one situation. Individual programs were developed to build up skills in the perceptual and language areas in which the child's level of functioning was below the level expected of a child of his age and intellectual ability. The child attended this class for approximately two hours each week. He was not taught from the regular curriculum during these sessions. The learning disabled children in Grades Three and Four at Vanier Elementary School were attending remedial classes or "catch-up" classes on a full-time basis. These are small classes (11 in Grade Three, 12 in Grade Four) and the children were given a watered-down version of the material that was covered in a regular Grade Three or Four curriculum. The purpose of these classes was to concentrate on the child's area of difficulty and bring him up to a level where he could pass on to a regular class in the next higher grade in at least the basic subjects of reading and mathematics. Other subjects, such as science and social studies, were taught through projects rather than from a text book. In Grade Four some of the learning disabled children attended regular classes but went to the "catch-up" class for reading classes.

The Grade Five pupils attended regular classes. Meetings were held by the school for the purpose of giving information about these programs to the parents of the children involved.

The remaining twenty-two learning disabled children in the population attended other schools in the city of St. John's. These children formed the population of Experimental Group 2. No formal programs were given to these children to remediate their particular problem. Each child's teacher obtained from the Learning Center a copy of the psychological report and some remedial suggestions applicable to classroom situations. These reports were delivered personally by the psychometrician and the contents of it were explained to the teacher. It was the school's responsibility to report to the parents the results of the diagnosis from the Learning Center.

A stratified random sample of fifty-one children between the ages of seven and ten years who attended regular classes was selected from the total male population at Vanier Elementary School to form the Control Group. Fifteen pupils were chosen from each of Grades Two, Three, and Four. Only six children were chosen from Grade Five because there were only three experimental children in Grade Five. The parents and teachers of this group of children

were asked to respond to the same questionnaire that was sent to the parents and teachers of the Experimental Groups. The control sample consisted of the total number of these children for whom both the teacher and parent responded to the questionnaire.

In summary, Experimental and Control Groups involved in this study were controlled for the variables of age, grade, and socio-economic status and sex. A stratified random sampling procedure was used to control age and grade. Socio-economic status and sex variables were controlled by including only male middle-class subjects in the study.

Rationale for Sampling Procedure. The decision to control for social class by including only middle-class subjects in this study was made on the basis that social status would have a significant effect on academic and vocational expectations for a child. There is evidence, also, that results of teacher expectations differ among social classes. In the Oak School Experiment by Rosenthal and Jacobson (1966), all of the children in this lower socio-economic school gained in IQ, but it was only among the girls that greater gains were shown by the "late-bloomers" compared to the Control Group. Among the boys, the "late-bloomers" gained less than the Control Group

did. The reverse of this was seen in a study of teacher expectancies in a middle-class school (Rosenthal and Evans, 1968). This time the male "late-bloomers" gained more than the Control Group, and the female "late-bloomers" gained less. In another study, the same experiment was carried out in an upper-class school (Conn, Edwards, Rosenthal and Crowne, 1968). In this study, both male and female "late-bloomers" made greater gains than the Control Group.

The fact that socio-economic status affects intelligence test scores is well documented. Lower-class children tend to obtain below average scores on tests of intellectual ability. This is because questions on IQ tests are culturally biased for middle-class subjects (Bereiter, 1972). Since the diagnosis of a learning disability depends on a discrepancy between assessed intellectual ability and academic performance, then an accurate intellectual assessment is necessary. Among the lower-class, many learning disabled children are not detected because their measured IQ is not discrepant with their academic performance (Bereiter, 1972). Therefore, it was necessary to use middle-class population because this is the population on which the tests used for diagnosis

were standardized.

The decision to exclude females from the present study was made because it seemed obvious that the difference between expectations for males and females would be large enough to warrant two separate studies. In addition, the majority of learning disabled children are males. Hunter (1971) considers reading disabilities as a male problem. The Celdic Report (1969) estimates the ratio of learning disabled males to females as two to one.

Because of the problems inherent in assessing intellectual ability of learning disabled children, Experimental and Control Groups could not be matched for intelligence on the basis of a single intelligence test. A learning disabled child is one whose achievement in one or more subject areas is unexpectedly low when compared with his mental ability. These children have difficulty comprehending some of the information they receive from the environment. Their development of some auditory perceptual, visual perceptual, motor or language skills is below average for their age level. Since learning disabled children can have problems in any one or a combination of perceptual areas, they do not form a homogeneous group. They are similar not in the nature of their

learning disability but rather that they do have a learning disability.

Since a learning disabled child has an inadequate understanding of information received from the environment through some sensory modality and since different IQ tests measure different kinds of perceptual and/or language skills, no one measure of intellectual ability can be used to assess the intellectual ability of every learning disabled child. To say that a learning disabled child is of average intellectual ability means that on some measure of intellectual ability he has scored within the average range for his age level. For example, a child with a disability in the area of visual perception may score in the Mental Defective range on the Performance Scale of the WISC and in the Average range on the Verbal Scale. He is said to be of average intellectual ability since, once his perceptual problems have been remediated he should obtain an average score on the Performance Scale as well. A more complicated case is one of a child who has a visual perceptual disability who is unable to express himself verbally. Both scales on the WISC will reveal low IQ's. However, the same child may obtain an average score on the Peabody Picture Vocabulary Test. This indicates that the

child is receiving verbal information but is unable to express his knowledge. Once he receives training in the perceptual and language areas in which his development has been lower than average, any measure of intellectual ability may be used to assess his level of intelligence. Therefore, it seems inappropriate to match for intellectual ability on one particular test when studying learning disabled children. At the most, it may be important to establish that all the children involved in the study are of average intellectual ability.

A learning disabled child should not be confused with a slow learner. By definition a slow learner is one whose general level of intelligence is below average for his age level. He is expected to achieve below average in his class. On the other hand, the learning disabled child is of average intellectual ability. His achievement is lower than would be predicted by his level of intelligence.

It could be argued that it is unnecessary to measure IQ's of children who are achieving at their grade level. As children get older, what IQ tests measure is school achievement (Bereiter, 1972). If we know that a child is achieving within the average range for his grade level, we can argue that his IQ

is within the average range for his age level.

The purpose of this study was to compare teacher and parent expectations for learning disabled children with those for normal children. Since, by definition a learning disabled child is of average intellectual ability, the Control Group must also be of average intellectual ability. Because of the difficulty of matching learning disabled groups with any other group on the basis of an IQ score, the Control Group was matched with the Experimental Groups for age and grade. The Peabody Picture Vocabulary Test was used to establish whether or not the members of the Control Group had the intellectual ability to achieve at a level typical of a child of their age and grade.

The Peabody Picture Vocabulary Test was used as the indicator of intellectual ability for this study because, of all the IQ measures administered to the Experimental Group, it made the fewest false-positive errors. Only six pupils in the Experimental Group scored below 95 on this test. All of these subjects had IQ's of 95 as measured on the WISC Performance sub-tests.

See Appendix B for a summary of information about control variables for children in the Experimental

and Control Groups.

Procedures. A questionnaire designed to measure expectations for a pupil's past, present and future academic achievement, present potential for achievement, and future vocational choice was sent to parents of children in the Experimental and Control Groups. A letter explaining the purpose of this study was sent with the questionnaire. The parents were requested to complete the questionnaire and return it in the self-addressed stamped envelope enclosed with the questionnaire. Ten days after the questionnaires were mailed, parents who had not returned the questionnaire were contacted by telephone to remind them of the questionnaire. In cases where a questionnaire had been misplaced, a new one was mailed the following day.

The same questionnaire that was mailed to the parents was delivered personally to the teachers. Most of the teacher questionnaires were completed while the experimenter waited. Some teachers took them home to complete and the experimenter picked them up the following day.

Information such as father's occupation, age, grade and intellectual ability and achievement level

was obtained from the records at the Learning Center for the children in the Experimental Groups. Age, grade, father's occupation and address was obtained from the school records at Vanier Elementary School for the Control Group. The Peabody Picture Vocabulary Test was administered to the Control Group by the experimenter at Vanier Elementary School.

Instruments.

1. Expectations. The majority of studies of teacher expectations for pupil behavior manipulate the teacher expectations and measure the changes caused by changed expectations. Therefore, very few instruments exist which are designed to measure expectations directly.

In a study of the effect of teacher expectations on reading achievement of first-grade boys, Broome (1970) measured teacher expectations directly. His questions were aimed at finding out differences between teachers' general attitudes as to whether or not boys or girls perform better on different tasks and in different learning situations. He did not ask the teacher to make predictions about a particular child.

Heintz (1968) used a questionnaire to assess teacher expectations for educable mentally retarded children. The instrument that he used contained the

arithmetic and reading items from the 1946 edition of the Wide Range Achievement Test. After each item on the test, the teacher was asked to predict the portion of educable mentally retarded individuals whom they would expect to answer the question correctly at the time the pupil left school. Again, the teacher was not asked to make a prediction about a particular child but about educable mentally retarded children in general.

In the present study, the experimenter wanted to investigate long and short term expectations for achievement of learning disabled children. Because they are learning disabled, their present achievement is below average and it would be reasonable to have low short-term expectations for their achievement. Because they are of average intellectual ability and should overcome their learning difficulty over the years, it is reasonable to have higher long-term expectations for them. Since no instrument exists that measures short and long-term expectations for individual children, one had to be devised (See Appendix A). The same questionnaire was used with both teachers and parents. They were instructed to rank the child's position in a group of 75 children assuming he was in Grade One, at the end of his

present grade, at the beginning of high school, and at the end of high school. At each grade level the child's achievement was predicted in reading, mathematics, social studies, and science. The questionnaire also asked for a prediction of his present achievement if he were working at his potential. At the end of the questionnaire, two open ended questions were included. On these, the teacher or parent was asked to predict the child's final level of educational achievement and his probable vocational choice.

The rank assigned to the child became his score for a particular subject in a particular grade. The final level of education was given a number corresponding to number of school years normally required to reach that level. The predicted vocation was assigned the appropriate number on the Blishen scale (1967).

2. Peabody Picture Vocabulary Test. This test is designed to estimate a subject's verbal intelligence through measuring his receptive vocabulary. It is especially fair for non-readers or children who have language difficulties because no reading or verbal responses are required. Most of the Experimental subjects have difficulty learning to read. Therefore, this test would be a valid measure of intellectual

level for the greatest number of children in this study. The Peabody Picture Vocabulary Test converts a raw score to percentile rank, mental age and IQ.

Chapter 4

RESULTS

Questionnaire Return Rate. The number of usable questionnaires returned by parents were as follows: 1) 17 out of 32 for Experimental Group 1; 2) 13 out of 22 for Experimental Group 2; and 3) 33 out of 51 for the Control Group. These returns from parents determined the number of subjects in each group since 100% returns were obtained from teachers.

The return of all these groups combined was 60%. In order to test the possibility of a significant difference in the return rate for each group, a Chi-square test of significance was applied to the frequency of returns (Ferguson, 1966). Using a $p<.05$ level of significance, no significant difference was observed between any of the three groups.

Variable Design. From the rating scales included on the questionnaire, eight variables were selected to represent rated past achievement and rated expectations for present grade, potential, and future success in reading and other academic subjects.

Scores for all questions represented the numerical position at which each Experimental and

Control Group child would rank in the reference group of 75 children. For example, if it was expected that a child would achieve at a higher level than 64 of the reference children, his score would be 65. Variables representing rated past achievement and rated expectations were derived from the questionnaires in the following manner:

1. Past reading. Past reading achievement was the score on question 1 (a).
2. Past mathematics. Past mathematics achievement was the score on question 1 (b). Mathematics is the only other academic subject in Grade One.
3. Present reading. Expectations for reading achievement at the end of the child's present grade was the score on question 3 (a).
4. Present other. Expectation for achievement in other academic subjects at the end of the child's present grade was the sum of the scores on questions 3 (b), 3 (c), and 3 (d).
5. Potential reading. Expectations of the child's potential for reading achievement was the score on question 2 (a).
6. Potential other. Expectation of the child's potential for achievement in other academic subjects was the sum of the scores of questions 2 (b), 2 (c),

and 2 (d).

7. Future reading. Expectations for the child's future achievement in reading was the sum of scores on questions 4 (a) and 5 (a).

8. Future other. Expectations for the child's future achievement in other academic subjects was the sum of the scores on questions 4 (b), 4 (c), 4 (d), 5 (b), 5 (c), and 5 (d).

The measures of expected educational and vocational goals were deleted from statistical analysis because a large number of both teachers and parents failed to respond to questions 6 and 7 on the questionnaire.

Experimental Group 1 versus Experimental Group 2. Measures taken from both Experimental Groups were compared with a view to combining both groups into a single Learning Disabled Group. In order to do this, t-tests for independent samples were applied to the control variables--age, grade, and IQ (Ferguson, 1966). T-tests for independent samples were also applied to parent ratings on the eight experimental variables, and to teacher ratings of these same variables. A conservative level of significance of $p<.20$ was adopted for these tests.

Table 1 includes the means and t-values

Table 1

Means and t-values of Control Variables
for the Two Experimental Groups.

Variable	Group 1 Means (n=17)	Group 2 Means (n=13)	t-value
Age (in Mos.)	107.18	106.23	0.20(ns)
Grade	3.24	3.00	0.70(ns)
IQ	104.88	104.92	-0.01(ns)
	*p<.20=1.313	(df=28)	

calculated for the difference between these means for the control variables. It can be seen that no significant differences are found between the Experimental Group 1 and Experimental Group 2 on the control variables.

In Table 2 group means for the parent ratings on all experimental variables and t-values for the differences between these means are found. It can be seen that no significant differences are found on parent ratings for any of the experimental variables.

In Table 3 group means for the teacher ratings on all experimental variables and t-values for the differences between these means are found. It can be seen that six out of the eight variables rated by the teachers showed no significant difference between the two Experimental Groups. However, Past Math and Present Other were significantly different at the $p<.20$ level.

Even though teacher ratings were significantly different on two experimental variables, it was decided to combine the two Experimental Groups into a single Learning Disabled Group for the following reasons. First, in both cases of significance, the t-values barely exceeded the conservative cut-off of $p<.20$. Such a result has high statistical probability, even where the two groups are not

Table 2

Means and t-values for Parent Ratings
for the Two Experimental Groups.

Variable	Group 1 Means (n=17)	Group 2 Means (n=13)	t-value
Past Reading	26.77	28.08	-0.24(ns)
Past Mathematics	46.18	52.31	-1.12(ns)
Present Reading	37.94	36.92	0.17(ns)
Present Other	142.94	139.62	0.26(ns)
Potential Reading	39.41	36.92	0.53(ns)
Potential Other	150.00	139.62	0.83(ns)
Future Reading	94.71	98.46	-0.46(ns)
Future Other	310.00	314.62	-0.20(ns)

*p<.20=1.313 (df=28)

Table 3

Means and t-value for Teacher Ratings for the Two Experimental Groups.

Variable	Group 1 Means (n=17)	Group 2 Means (n=13)	t-value
Past Reading	14.41	13.08	0.42(ns)
Past Mathematics	25.88	34.62	-1.38*
Present Reading	19.12	17.31	0.34(ns)
Present Other	75.29	97.31	-1.34*
Potential Reading	32.35	26.54	0.83(ns)
Potential Other	98.24	109.23	-0.61(ns)
Future Reading	46.47	47.69	-0.11(ns)
Future Other	168.24	194.62	-0.78(ns)

*p<.20=1.313 (df=28)

different, given the large number of t-tests performed.

Secondly, it will be remembered that the prime reason for separating the two Learning Disabled Groups was the possible bias of the teachers from Vanier Elementary School as a result of the programs for learning disabled children at that school. It was thought that the effect of this bias may have caused the teachers at Vanier Elementary School to rate learning disabled children higher than would teachers at other schools where special programs for these children do not exist. It can be seen in Table 3 that the teachers at Vanier Elementary School (Experimental Group 1) rated their pupils lower on the variables that were statistically different than did teachers of children in Experimental Group 2. Consequently, these differences are being attributed to chance findings and both Experimental Groups will be combined for the remaining statistical analysis.

Learning Disabled versus Control Groups. For the remaining analysis, the two Experimental Groups were combined into one Learning Disabled Group with an N=30. In order to create groups of equal numbers, three subjects were dropped from the Control Group. One subject was dropped because his IQ as measured by the Peabody Picture Vocabulary Test was below average

(IQ=81). The other two were dropped because of exceptionally high IQ's (146 and 141). In this way, the similarity between the ranges of measured intellectual ability of the Experimental and Control Groups was increased.

In Table 4, means, standard deviations, and t-tests for independent samples derived from non-experimental variables are found. It can be seen that the groups do not differ significantly on the control variables, age and grade. The finding that the groups do differ in IQ is a function of the nature of the Experimental Group being composed of learning disabled children. This point was brought out in a previous section describing the make-up of these groups. At that time it was argued that it was not possible to control for IQ but it should be established that both the Learning Disabled and Control Groups were of at least average intellectual ability. Table 4 demonstrates that this is the case.

In Table 5, means and standard deviations for the Learning Disabled and the Control Groups are found.

In order to evaluate the experimental hypotheses stated for this thesis, a two-by-two analysis of variance was performed with Learning Disabled versus Control Groups' ratings as one independent variable and parent versus teacher ratings as the other independent variable (Winer, 1962). The parent and teacher ratings were treated as a repeated measures variable. This type

Table 4

Means, Standard Deviations and t-values for Non-Experimental Variables.

Variable	L.D. Group Mean (N=30)	S.D.	Control Group Mean (N=30)	S.D.	t-value (df=58)
Age	106.77	12.69	103.73	11.45	1.29(ns)
Grade	3.13	0.90	2.97	0.89	0.72(ns)
IQ	104.90	13.57	115.57	8.51	-3.65*

*p<.01

Means and Standard Deviation of
Experimental Variables.

Variable	L.D. Group Mean (N=30)	L.D. Group S.D. (N=30)	Control Group Mean (N=30)	Control Group S.D. (N=30)
Parent Ratings				
Past Reading	27.33	14.72	56.67	12.13
Past Math	48.83	15.00	58.83	12.50
Present Reading	37.50	15.96	59.67	10.50
Present Other	141.50	34.62	173.00	32.21
Potential Reading	38.33	12.62	60.83	9.48
Potential Other	145.50	33.97	172.83	32.02
Future Reading	96.33	21.81	123.83	16.33
Future Other	312.00	61.97	355.67	46.70
Teacher Ratings				
Past Reading	13.83	8.58	54.83	13.16
Past Math	29.67	17.42	56.33	12.59
Present Reading	18.33	14.34	57.33	11.80
Present Other	84.83	45.13	177.00	31.83
Potential Reading	29.83	18.87	58.17	11.93
Potential Other	103.00	48.27	182.00	31.80
Future Reading	47.00	29.67	116.17	21.92
Future Other	179.67	91.46	360.00	58.68

of analysis of variance was performed on each of the eight experimental variables. A .05 level of significance was adopted for the rejection of the null hypotheses.

The results of the eight analyses of variance performed on the eight dependent variables can be found in Tables 6 through 13.

It can be seem by referring to Tables 6 through 13 that the results of all the analysis of variance performed yield highly similar results. Except for the interaction term on the dependent variable Potential Reading, all main effects and interactions are significant at the $p<.01$ level. This means that all stated null hypotheses are rejected except for the single noted exception. Therefore, the experimental hypothesis that Learning Disabled children would be rated lower than Control children is supported by significance of all dependent variables.

Although the experimental hypotheses regarding the difference between parent and teacher ratings is supported, this interpretation is confounded by the significant interaction term found in seven of the eight analyses performed. In order to clarify the situation with respect to the significant interaction and the significant main effect of parent versus teacher ratings, a series of subsidiary statistical analyses were performed.

Table 6

Summary of Analysis of Variance Performed on the Dependent Variable: Past Reading.

Source	Sum of Squares	df	Mean Squares	f-ratio
Between Ss	48346.69	59		
A(L.D. vs Control)	37100.81	1	37100.81	191.35**
Ss within Grps.	11245.88	58	193.89	
Within Ss	9250.00	60		
B(Parents vs Teachers)	1763.31	1	1763.31	15.82**
AB-Interaction	1020.88	1	1020.88	9.16**
BxSs Within Grps.	6465.81	58	111.48	

*p<.05 **p<.01

Table 7

Summary of Analysis of Variance Performed on the Dependent Variable: Past Mathematics.

Source	Sum of Squares	df	Mean Squares	f-ratio
Between Ss	29649.25	59		
A(L.D. vs Control)	10083.25	1	10083.25	29.89**
Ss Within Grps.	19566.00	58	337.34	
Within Ss	10450.00	60		
B(Parents vs Teachers)	3520.81	1	3520.81	42.14**
AB-Interaction	2083.50	1	2083.50	24.94**
BxSs Within Grps.	4845.69	58	83.55	

*p<.05 **p<.01

Table 8

Summary of Analysis of Variance Performed on the Dependent Variable: Present Reading.

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	42677.31	59		
A(L.D. vs Control)	28060.19	1	28060.19	111.34**
Ss Within Grps.	14617.13	58	252.02	
Within Ss	11562.50	60		
B(Parents vs Teachers)	3466.88	1	3466.88	33.68**
AB-Interaction	2125.25	1	2125.25	20.65**
BxSs Within Grps.	5970.38	58	102.94	

*p<.05 **p<.01

Table 9

Summary of Analysis of Variance Performed on the Dependent Variable: Present Other.

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	217975.00	59		
A(L.D. vs Control)	114701.00	1	114701.00	64.42**
Ss Within Grps.	103274.00	58	178.59	
Within Ss	98425.00	60		
B(Parents vs Teachers)	20804.00	1	20804.00	24.12**
AB-Interaction	27602.00	1	27602.00	32.01**
BxSs Within Grps.	50019.00	58	862.40	

*p<.05 **p<.01

Table 10

Summary of Analysis of Variance Performed on the Dependent Variable: Potential Reading.

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	33927.31	59		
A(L.D. vs Control)	19380.00	1	19380.00	77.27**
Ss Within Grps.	14547.31	58	250.82	
Within Ss	8312.50	60		
B(Parents vs Teachers)	935.19	1	935.19	7.62**
AB-Interaction	255.44	1	255.44	2.08(ns)
BxSs Wtihin Grps.	7121.88	58	122.79	

*p<.05 **p<.01

Table 11

Summary of Analysis of Variance Performed on the Dependent Variable: Potential Other

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	191593.00	59		
A(L.D. vs Control)	84802.00	1	84802.00	46.06**
Ss Within Grps.	106791.00	58	1841.22	
Within Ss	81675.00	60		
B(Parents vs Teachers)	8334.00	1	8334.00	9.07**
AB-Interaction	20019.00	1	20019.00	21.78**
BxSs Within Grps.	53322.00	58	919.34	

*p<.05 **p<.01

Table 12

Summary of Analysis of Variance Performed on the Dependent Variable: Future Reading.

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	111067.00	59		
A(L.D. vs Control)	70083.00	1	70083.00	99.18**
Ss Within Grps.	40984.00	58	706.62	
Within Ss	57400.00	60		
B(Parents vs Teachers)	24367.00	1	24367.00	70.62**
AB-Interaction	13021.00	1	13021.00	37.74**
BxSs Within Grps.	20012.00	58	345.03	

*p<.05 **p<.01

Table 13

Summary of Analysis of Variance Performed on the Dependent Variable: Future Other.

Source	Sum of Squares	df	Mean Square	f-ratio
Between Ss	729197.00	59		
A(L.D. vs Control)	376315.00	1	376315.00	61.85**
Ss Within Grps.	352882.00	58	6084.17	
Within Ss	427150.00	60		
B(Parents vs Teachers)	122880.00	1	122880.00	43.41**
AB-Interaction	140088.00	1	140088.00	49.49**
BxSs Within Grps.	164182.00	58	2830.72	

*p<.05 **p<.01

With regard to the dependent variable Potential Reading, the absence of a significant interaction term allows a clear interpretation of the significant main effect associated with parent versus teacher ratings. By reference to the means in Table 5, it can be seen that teacher ratings are lower than parent ratings.

Subsidiary Analyses. The significant interactions in seven of the dependent variables confounds the interpretation of the analyses of variance. Reference to the table of means (Table 5) shows that in the Control Group little difference exists between parent and teacher ratings, while in the Learning Disabled Group parent ratings are generally higher than teacher ratings. It is possible that the main effect associated with parent versus teacher ratings is a function of the large difference between parent and teacher ratings in the Learning Disabled Group alone.

A further problem of interpretation exists. It is also possible that the significant interaction terms are a function of insufficient "top" on the rating scales. Under this situation, parent ratings in the Control Group would have been held artificially low because of inadequate space on the high end of the scale for them to rate their children. If this were true, the real situation would be a difference

between parent and teacher ratings in both Learning Disabled and Control Groups and no significant interaction between the two dependent variables.

In order to clarify this situation, t-tests for correlated samples were performed on parent versus teacher ratings separately for each of the Learning Disabled and Control Groups on the seven variables for which significant interaction variables were found (Ferguson, 1966). In Table 14 the results of these t-tests can be found. The .05 level of significance was adopted for the rejection of the null hypothesis.

The results given in Table 14 clearly show that there is no difference between parent and teacher ratings in the Control Group, and that parents rate Learning Disabled children significantly higher than do teachers. Thus, these results tend to show that the significant differences observed on teacher-parent main effects tend to be a result of the interaction between the results of the two independent variables.

Further support for this claim was obtained by performing a non-parametric sign test on the difference between parent and teacher ratings in the Control Group (Ferguson, 1966). In each of these tests performed on the seven dependent variables in question, no significant difference ($p<.05$) was observed. This finding strongly supports the contention

Table 14

Results of t-tests Comparing Parent versus Teacher Ratings

Variable	t-values (df=29) Control Group	Learning Disabled Group
Past Reading	0.81(ns)	4.43**
Past Math	1.16(ns)	7.75**
Present Reading	1.40(ns)	5.91**
Present Other	-0.65(ns)	6.63**
Potential Other	-1.50(ns)	4.72**
Future Reading	2.00(ns)	9.04**
Future Other	-0.42(ns)	8.25**

*p<.05 **p<.01

that the significant interaction terms are not a function of the lack of "top" on the rating scales. Therefore, it is concluded that for the seven variables treated in this section, the significant main effect of teacher-parent ratings can better be accounted for by the interaction between the two independent variables.

Summary of Results. The results of this study can be summarized as follows:

1. On all eight dependent variables, Learning Disabled children were rated significantly lower than Control children. Therefore, Hypothesis 1, which stated that there would be no differences between the rated expectations of Learning Disabled and Control children, is rejected.

2. On the dependent variable Potential Reading, parents' ratings were higher than teachers' ratings, regardless of whether they were Learning Disabled or Control children. Therefore, Hypothesis 2, which stated that there would be no difference between the ratings of expectations made by parent and teacher groups, is rejected for this variable only.

3. On the remaining seven dependent variables, parents' and teachers' ratings are similar for Control children, but teachers rate Learning Disabled children significantly lower than do parents. Therefore,

Hypothesis 3, which stated that there would be no interaction between parent and teacher rated expectations for Learning Disabled and Control children, is rejected for these variables. Because of this interaction effect, Hypothesis 2 is not appropriate for these seven dependent variables.

Chapter 5

DISCUSSION

The results obtained from this study clearly show that learning disabled children are rated as being less successful academically than control group children in their past, present, and future school achievement. Since control children actually did achieve at a higher level than learning disabled children, differences in rated achievement levels for these periods in their favour are valid in that they reflect the real situation. A learning disabled child's potential for achievement as indicated by his measured intellectual ability is inhibited by his particular disability, so it stands to reason that his potential for achievement at the present time would be rated below that of a normal child. There seems to be nothing unusual in the findings that learning disabled children are rated lower than control group children regarding past, present and potential for current achievement. What is interesting is that the pattern continues to future achievement. Both parents and teachers expect control group children to achieve at a higher level than learning disabled children when

these children are in high school.

Although learning disabled children were rated lower than control group children by both teachers and parents, it was found that ratings by teachers were significantly lower than ratings by parents for these children. It is suggested that the reason the parents' ratings were higher than teacher ratings was because parents continue to see their children as being average. This point is substantiated by reference to the table of means (Table 5). For example, ratings for Present Reading show that the average parent rating for learning disabled children is 37.50. This figure means that parents rated their children in the middle of the seventy-five reference children. On the other hand, the teachers of these children rated their achievement as below average. This finding suggests that parents do not accept the fact that their children are below average at any time. Interestingly, both parents and teachers expected learning disabled children to maintain this ranking in the future.

It was previously concluded on the basis of evidence from a survey of the relevent literature that long range achievement for learning disabled and control children should not be dissimilar. Both the teachers and parents in this study had been informed of the fact that their learning disabled child was at least average

in intellectual ability, and that he should eventually achieve at a level congruent with his ability. Therefore, the teachers and the parents of learning disabled children involved in this study were aware that future achievement of learning disabled children would most probably be no different than that of control children. From the results of this study, it seems that regardless of this information, future achievement of a learning disabled child was judged on the basis of negative past and present school achievement, rather than the positive prognosis resulting from the information made available to teachers and parents regarding the child's potential for achievement.

It should be noted that the conclusions of this study are limited by the samples of children selected. As previously mentioned, all subjects were middle-class in socio-economic status. Rosenthal (1968) has shown that expectations for school achievement are affected by social class values. Therefore, the present findings cannot be projected to children of upper, or lower social classes. In view of this, an investigation of teacher and parent expectations for achievement of upper, and lower class learning disabled children should prove to be very interesting.

Another area for future investigation is evident. In all fairness to the teachers and parents of the children in this study, it should be noted

that they have had no real evidence of the long-term effects of diagnostic and remedial programs specifically designed for the learning disabled child. Therefore, it is suggested that a replication of the present study be made at a time when some of these children have successfully completed their remedial training. As an adjunct to this point, it would be informative to re-run this particular study in a community that has had adequate services for learning disabled children for a period of time.

In view of the evidence regarding the effects of expectations on a person's behavior, the finding that learning disabled children are expected to achieve at a lower level than control children in the future is extremely important. Research on the expectation phenomenon has certainly demonstrated that a person's behavior tends to conform to expectations that other people have for him (Rosenthal, 1966, 1968, 1971). Therefore, if a learning disabled child is always expected to achieve at a lower level than a control child, he most likely will never reach the level of which he is capable. Unfortunately, the result is that the learning disabled child's achievement will continue to be low in spite of his ability.

Although no studies have evaluated the effect of teacher or parent expectations on the achievement

of learning disabled children, it is reasonable to assume that the following pattern will hold. Because the learning disabled child is expected to be unsuccessful in school, he will not achieve as well as he is able. He will eventually come to regard himself as less capable than other children. He will give up easily because he does not feel that he is capable of doing it. He will not be encouraged to keep trying because others feel that he is incapable as well. He will set lower educational and vocational goals for himself and will probably be encouraged to do so. If he does desire to pursue a career which requires considerable academic ability, he will probably be persuaded to change his mind. In short, he will incorporate the negative attitudes others have had regarding his ability into his own attitude about himself.

The consequences of these expectations are very great when the potential loss of educated persons to society is considered. A study by Myklebust and Boshes (cited in Lerner, 1972) concluded that seven to eight percent of the school population is composed of learning disabled children. Considering only Newfoundland, for example, approximately 160,000 children are enrolled in schools for the 1972-73 school year. These statistics suggest that as many as 11,000

Newfoundland children could be learning disabled. It will be to the detriment of Newfoundland if these children are prevented from attaining the educational level of which they are capable as a result of insufficient facilities for remediation of their disabilities.

Implications. In view of the extensiveness of this problem, the present services for giving help to learning disabled children are grossly inadequate to meet the demands. At present, the only services exclusively for the diagnosis and remediation of the problems associated with learning disabilities are provided by the Learning Center at Memorial University, and Vanier Elementary School in St. John's. In a period of one year, approximately one hundred and eighty children make use of the services of the Learning Center. The program at Vanier Elementary School is able to provide help for close to forty children. Therefore, even if a conservative estimate is taken, the immense discrepancy between the number of learning disabled children who need help and the number who are receiving help emphasizes that there is cause for concern. The trend in recent years has been towards increasing the number of diagnostic and remedial services for these children. It is obvious that

expansion in this direction is needed in Newfoundland.

When this expansion begins, it seems logical to expect that the services presently available for learning disabled children in Newfoundland will be modeled. However, the results of this study imply that the existing services could be made more effective in terms of dispensing knowledge on the learning disabled child. It is suggested that the low expectations for the learning disabled child can, in large part, be accounted for by the fact that teachers and parents lack up-to-date information regarding the nature and prognosis for these children. A successful program would seek to change the present attitudes of teachers and parents that link future achievement with past achievement regardless of the remedial work that is being done with the child.

A number of ways in which this information could be transmitted to teachers are evident. For example, new educational services could incorporate public information programs which stress the importance of instructing teachers regarding the value of new services available to the special education child. Teacher workshops or in-service training programs could be given in areas where new educational procedures or services are innovated. Outside consultants could be brought in from

places where such services have been in operation for a period of time to explain long-term effects of the services.

The importance of educating parents regarding new educational programs is usually underestimated. Parents are obviously concerned with how their children are being educated. If they feel that present programs are not adequate, they could exert pressure for updating and expanding special services. Therefore, correct information regarding new services for children should be available to parents. Perhaps, Parent Teacher Associations could prove to be effective channels for such communications.

Parent political groups also provide an excellent means for lobbying for the improvement of facilities for learning disabled children. It is suggested that one such political-educational organization that would push for the various reforms is the Canadian Association for Children with Learning Disabilities. This group has shown itself to be highly effective in many other parts of Canada.

Conclusions. In the end, the rationale, results and conclusions of this study can be synthesized to a consideration of attitudes exhibited by teachers and parents toward learning disabled children. Initially, it was argued that the academic potential of learning

disabled and control children would be similar. Following from this, the results of the study clearly demonstrate that even long-term expectations for learning disabled children were significantly lower than for control children. Given the findings of Rosenthal, it can be argued that if these attitudes persist, the learning disabled child is doomed to underachievement. The implications are obvious; attention must be focused on changing parent and teacher attitudes regarding a learning disabled child's potential for academic performance. It is only in this way that the learning disabled child may, after remediation of his problem, continue through his school career without discrimination or prejudice.

As a final support for this conclusion, a quote from the Commission on Emotional and Learning Disorders in Canada (1969) seems highly appropriate. In the report of this commission, One Million Children, it was stated that "Many of our recommendations call for sweeping changes in policy, in planning, in practice, but most of all in attitude." (CELDIC report, 1969, p. 471). The findings of the present day study accentuate the necessity for immediate action on this recommendation.

Summary. This study was undertaken to investigate

teacher and parent expectations for achievement of middle-class learning disabled boys as compared with a control group of middle-class boys of similar age, grade and potential for achievement. The learning disabled children had been diagnosed at the Learning Center, Memorial University and recommendations for the remediation of their specific learning problems had been made to their teachers. Although these children had not completed their remedial instruction at the time of the study, teachers and parents were informed that these children should achieve at a level congruent with their intellectual ability once they overcame their disabilities with special training.

Teachers and parents of learning disabled and control group children were asked to complete a questionnaire designed to measure long- and short-term expectations for achievement. The number of subjects for whom both parents and teachers returned usable questionnaires were 30 out of 54 for the Learning Disabled Group and 33 out of 51 for the Control Group. Three of the control subjects were dropped because of non-average IQ ratings. From the rating scales included on the questionnaire, eight variables were selected to represent rated past achievement, rated potential and expectations for the present grade, and future success in reading and other academic subjects. It was

observed that learning disabled children were rated significantly lower than control children by both parents and teachers for all of these variables. For all subjects parent ratings were higher than teacher ratings except for potential ability for reading achievement. For the other variables, parent and teacher ratings were similar for control children but teachers rated learning disabled children significantly lower than did parents. On the basis of these results, it was argued that teachers' and parents' attitudes regarding a learning disabled child's potential for academic success should be changed. Areas in which subsequent research would be valuable were suggested.

Selected Bibliography

Ackerman, Peggy T., M.A., Peters, John E., M.D., & Dykeman, Roscoe A., Ph.D. "Children with Specific Learning Disabilities: WISC Profiles," Journal of Learning Disabilities. Vol. 4, No. 3 (March, 1971). 33-49.

Anastasia, Anne. Psychological Testing. New York: MacMillan Publishers, 1956.

Barber, Xenophon, T., & Silver, Maurice J. "Fact, Fiction, and the Experimenter Bias," Psychological Bulletin Monograph. Vol. 70, No. 6, Part 2 (December, 1968). 1-29.

Barber Xenophon, T., & Silver, Maurice J. "Pitfalls in Data Analysis and Integration: A Reply to Rosenthal," Psychological Bulletin Monograph. Vol. 70, No. 6, Part 2 (December, 1968). 48-62.

Bereiter, Carl. "The Relation of Social Class and Educational Aptitude," Canadian Psychologist. Vol. 3, No. 4 (October, 1972). 329-340.

Blishen, Bernard R. "A Socio-Economic Index for Occupations in Canada," Canadian Review of Sociology and Anthropology. Vol. 4, No. 1 (February, 1967). 45-53.

Broome, Billy Jean. "An Investigation of the Effects of Teachers' Expectations on the Achievement in Reading of First Grade Boys" (unpublished doctoral dissertation, the Louisiana State University and Agricultural and Mechanical College, 1970).

Brophy, Jere E., & Good, Thomas L. "Teacher Expectations: Beyond the Pygmalion Controversy," Phi Delta Kappan. Vol. 54, No. 4 (December, 1972). 276-278.

Campbell, William G. Form and Style in Thesis Writing. 3d ed. Boston: Houghton Mifflin Co., 1969.

Combs, Arthur W. "Intelligence from a Perceptual Point of View," The Self in Growth, Teaching, and Learning, ed. Don E. Hamachel (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1965), 134-132.

Commission on Emotional and Learning Disorders in Children, One Million Children--The Celdic Report. Canada: Leonard Crainford, 1970.

Critchley, MacDonald, Development Dyslexia. London: Wm. Heineman Books, 1964.

Dunn, Lloyd M., Ph.D. The Peabody Picture Vocabulary Test Manual. Circle Pines, Minnesota: American Guidance Service, Inc., 1965.

Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Co., 1966.

Heintz, Paul. "The Relationship Between Teacher Expectation of Academic Achievement and Current School Achievement of Educable Mentally Retarded Pupils in Special Class" (unpublished doctoral dissertation, Columbia University, 1968).

Hunter, Edna J., Ph.D., & Johnson, Laverne C., Ph.D. "Development and Psychological Differences Between Readers and Non-Readers," Journal of Learning Disabilities. Vol 4, No. 10 (December, 1971). 33-38.

Kender, Joseph, Ed.D. "Is There Really a WISC Profile for Poor Readers?" Journal of Learning Disabilities. Vol. 5, No. 7 (August-September, 1972). 397-400.

Kurtz, John J., & Sevenson, Esther J. "Factors Related to Over-Achievement and Under-Achievement in School," The School Review. Vol. 59, No. 9 (September, 1951). 472-480.

Lerner, Janet W. Children with Learning Disabilities. Boston: Houghton Mifflin Co., 1971.

Meichenbaum, D.H., Bowers, K.S., & Ross, R.R. "A Behavioral Analysis of Teacher Expectancy Effect," Journal of Personality and Social Psychology. Vol. 13 (1969). 306-313.

Meichenbaum, D.H., & Smart, I. "The Use of Direct Expectancy to Modify Academic Performance and Attitudes of College Students," Journal of Counseling Psychology, (in press).

Myers, P.L., & Hammill, D.D. Methods for Learning Disorders. Toronto: John Wiley & Sons, Inc., 1969.

Novak, J. "Dyslexia: What is it?" The Evening Sun. Baltimore. (February 9, 1971).

Ontario Association for Children with Learning Disabilities. A Brief on Perceptually Handicapped Children in Ontario. 1964.

Oppenheimer, J. "All About Me," Journal of Learning Disabilities. Vol. 5, No. 7 (August-September, 1972). 33-48.

Palardy, M.J. "For Johnny"s Reading Sake," The Reading Teacher. Vol 22, No. 8 (May, 1969). 720-723.

Palardy, M.J. "What Teachers Believe--What Children Achieve," The Elementary School Journal. Vol. 59 (April, 1969). 370-374.

Rice, J.A., Ph.D., & Doughtie, E.B., Ph.D. "IQ and the ITPA: Classification versus Diagnosis," Journal of Learning Disabilities. Vol.3, No. 9 (September, 1970). 48-51.

Rosenthal, R. Experimenter Effects in Behavioral Research. New York: Appleton-Century-Crofts, 1966.

Rosenthal, R. "Experimenter Expectancy and the Reassuring Nature of the Null Hypotheses Procedure," Psychological Bulletin Monograph. Vol. 70, No. 6, Part 2 (December, 1968). 30-47.

Rosenthal, R. "Teacher Expectations and Pupil Learning," Teachers and the Learning Process, ed. Robert D. Storm (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1971). 33-60.

Rosenthal, R. & Jacobson L. Pygmalion in the Classroom: Teacher Expectations and Pupils' Intellectual Development. New York: Holt, Rinehart and Winston, 1968.

Rosenthal, R. & Jacobson, L. "Teacher Expectations for the Disabvantaged," Scientific American. Vol. 218, No. 4 (April, 1968). 19-23.

Rosenthal, R. & Rubin, D.B. "Pygmalion Reaffirmed," in Pygmalion Reconsidered: A Case Study in Statistical Inference, by Elashoff, J.D., and Snow, R.E. (Worthington, Ohio: Charles A. Jones Publishing Co., 1971). 139-155.

Royal Commission on Education and Youth, Province of Newfoundland and Labrador, 1967.

Stott, D.H. Programmed Reading Kits 1 & 2 and Manual. Gage Educational Publishing, Ltd., 1970.

Thompson, Lloyd J., M.D. "Language Disabilities in Men of Eminence," Journal of Learning Disabilities. Vol. 4, No. 1 (January, 1971). 34-45.

Thompson, Lloyd J. Reading Disability. Springfield, Illinois: Charles C. Thomas, 1966.

Winer, B.J. Statistical Principles in Experimental Design. New York: McGraw-Hill Book Co., 1962.

APPENDICES

APPENDIX A

Included in Appendix A are the questionnaires which were sent to teachers and parents of the subjects of this study, and the covering letters which were inc included with the parent questionnaires.

QUESTIONNAIRE

Name: _____

Name of School: _____

Grade Taught: _____

Years of Teaching Experience: _____

Years of University Training: 1___ 2___ 3___ 4 or more___

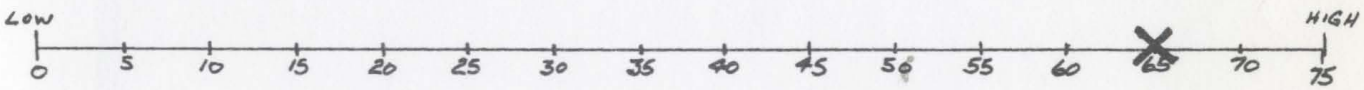
Number of Students in your Class: _____

DIRECTIONS:

On the basis of your experience with _____ as a student, would you please complete the following questionnaire.

Sample:

Suppose this child is in a swimming class of 75 children. Where do you think he would rank on a test of swimming ability?



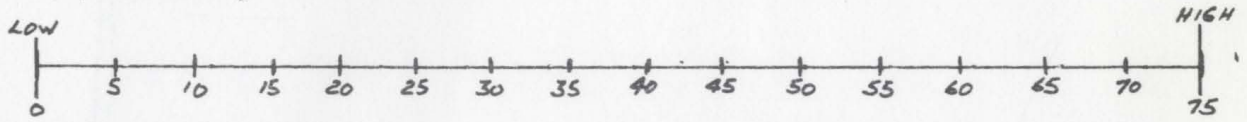
The X at 65 indicates that he would rank tenth in the class. That is, he is a better swimmer than 64 of the children in the class, or the tenth best swimmer in the class.

Please complete the following questionnaire in the same manner.

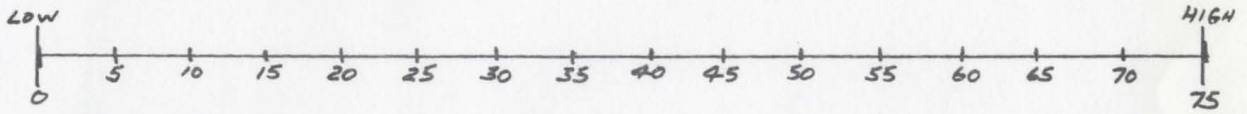
1. In this question, please answer on the basis of your present impressions rather than referring to the child's progress reports or school records.

   Suppose that when this child was in Grade 1 there were 75 children in his grade. How would you rank his achievement in the following subjects?

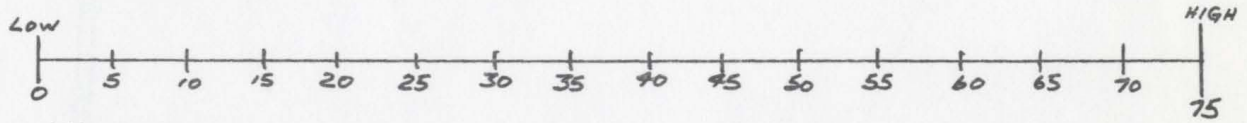
   (a) Reading



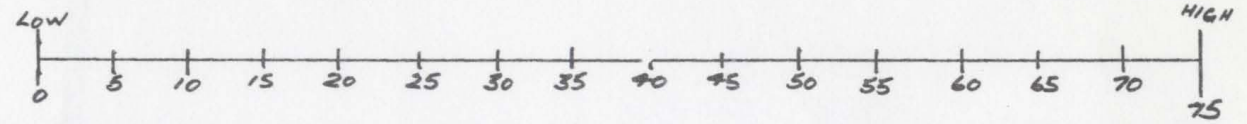
   (b) Mathematics



   (c) Social Studies

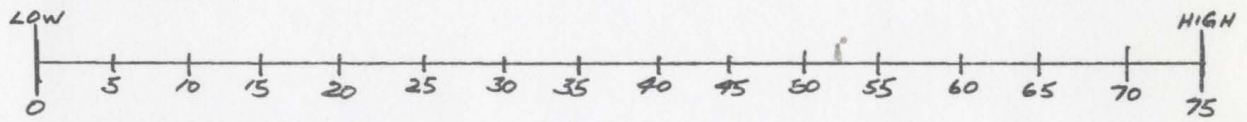


   (d) Science

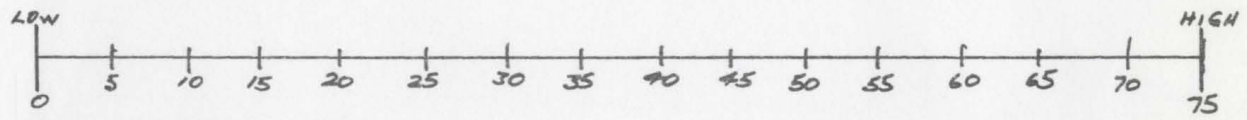


2. Suppose there are 75 children in this child's grade at the present time. If he were achieving at his potential, where would you rank him in the following subjects?

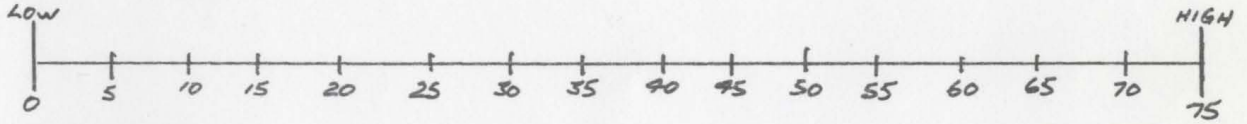
   (a) Reading



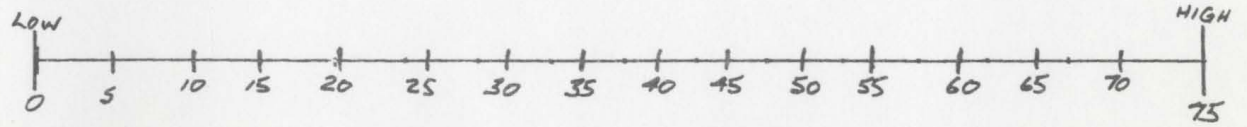
   (b) Mathematics



   (c) Social Studies

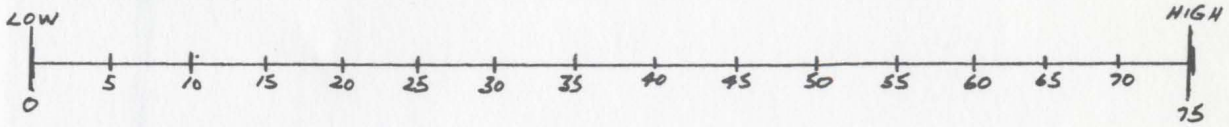


   (d) Science



3. Suppose that there are 75 children in this child's present grade. Where do you think his achievement will rank at the end of the 1972-73 school year?

(a) Reading



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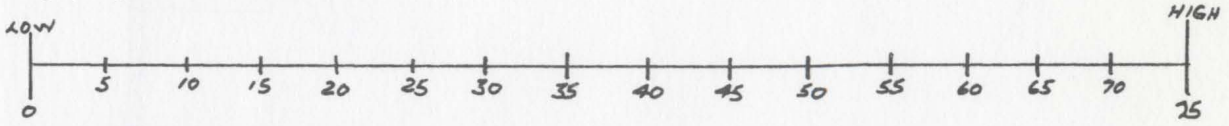

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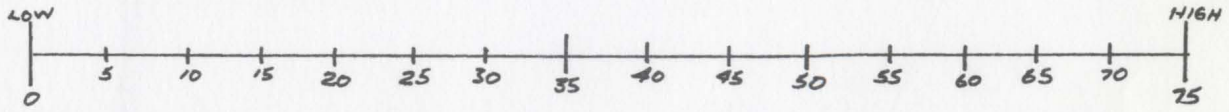

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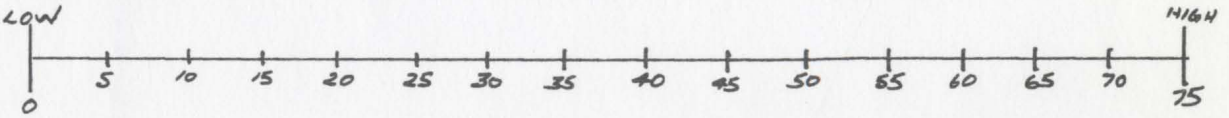
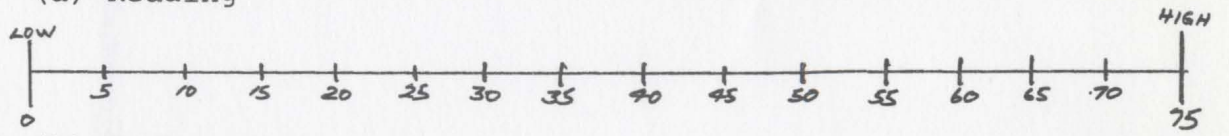


4. Suppose that in this child's first year of high school there are 75 students in his grade. How well do you think he will be achieving in the following subjects?

(a) Reading



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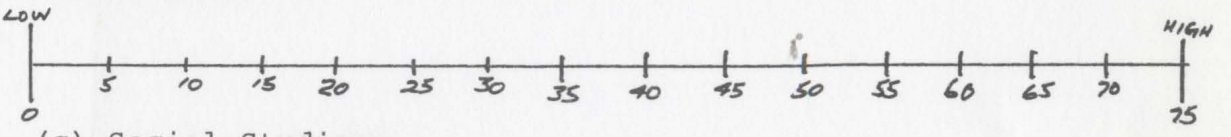

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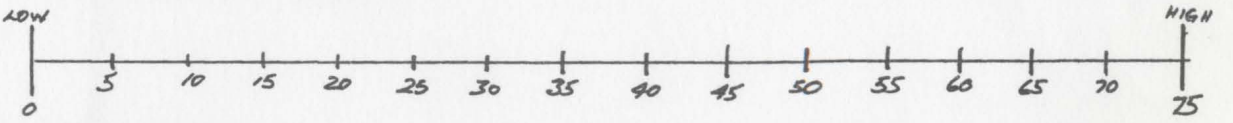

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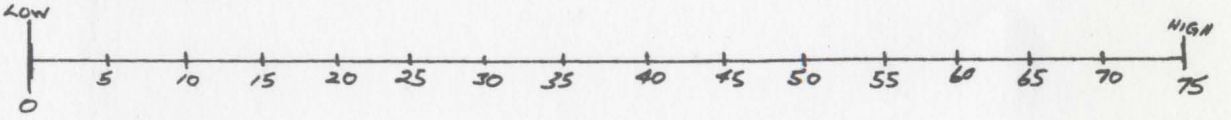
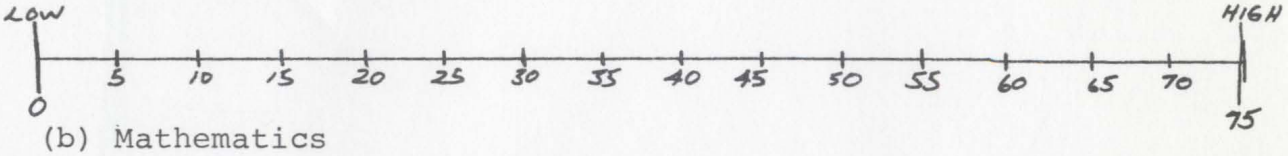
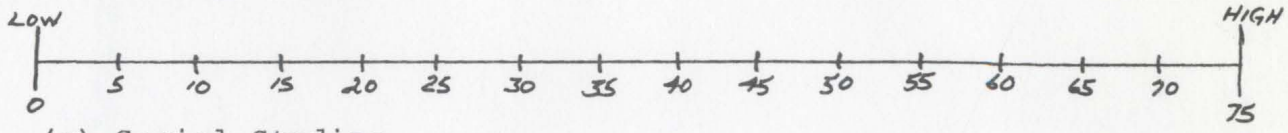


5. Suppose that this child is in his final year of high school. There are 75 children in his grade. How would you rank his achievement in the following subjects?

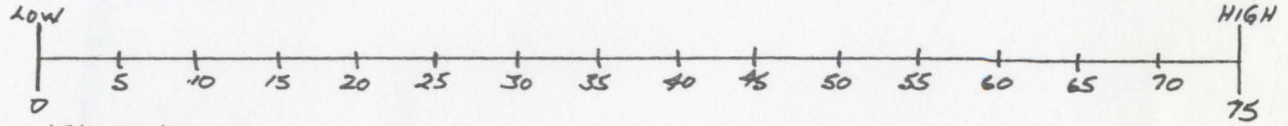
(a) Reading



(b) Mathematics



(c) Social Studies



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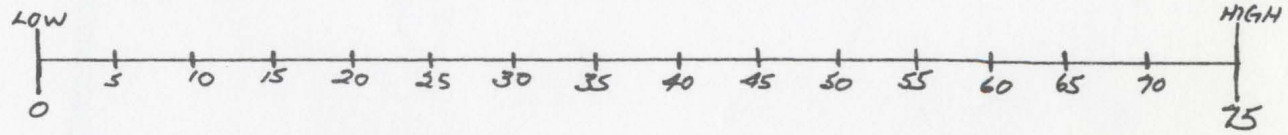


6. What level of education do you expect this child to achieve?

_____

_____

7. Based on your present knowledge of this child's interests and abilities, list one or more occupations that you think he will be best suited for as an adult.

_____

_____

_____

_____

QUESTIONNAIRE

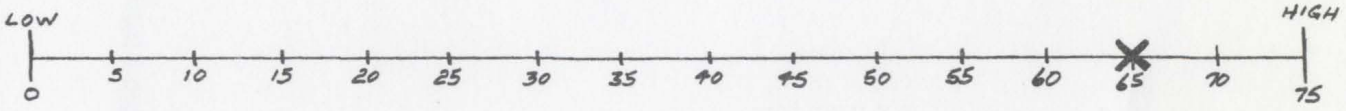
NAME: _____

DIRECTIONS:

Please complete the following questions about your son, _____

Sample:

Suppose your child is in a swimming class of 75 children. Where do you think he would rank on a test of swimming ability?



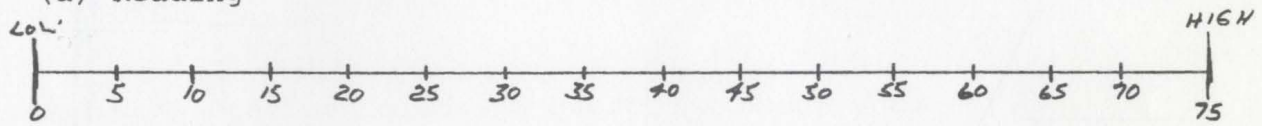
The X at 65 indicates that he would rank tenth in the class. That is, he is a better swimmer than 64 of the children in the class, or the tenth best swimmer in the class.

Please complete the following questionnaire in the same manner.

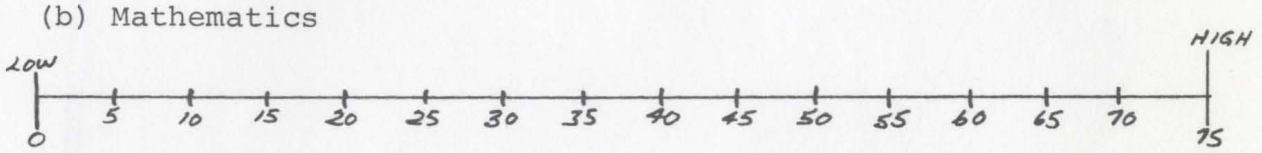
1. In this question, please answer on the basis of your present impressions rather than referring to your child's progress reports or school records.

   Suppose that when your child was in Grade 1 there were 75 children in his grade. How would you rank his achievement in the following subjects?

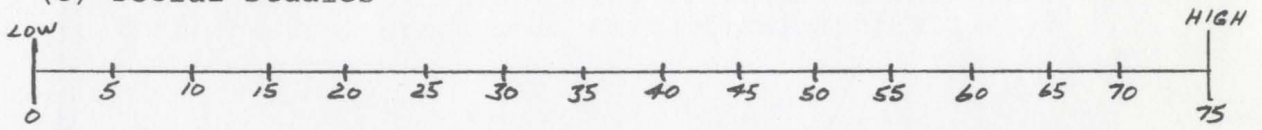
   (a) Reading



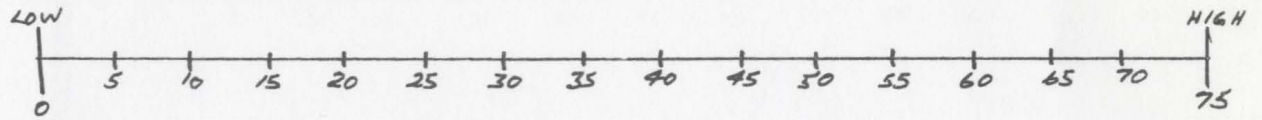
   (b) Mathematics



   (c) Social Studies

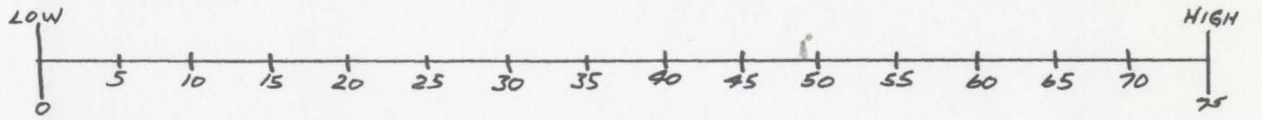


   (d) Science

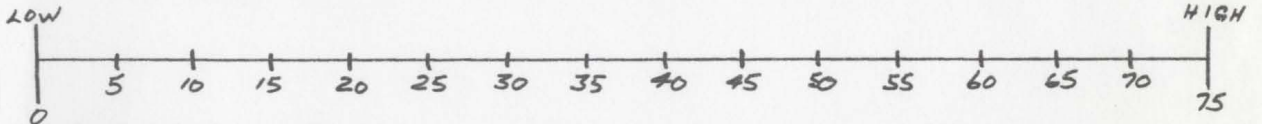


2. Suppose there are 75 children in your child's grade at the present time. If he is achieving at his potential, where would you rank him in the following subjects?

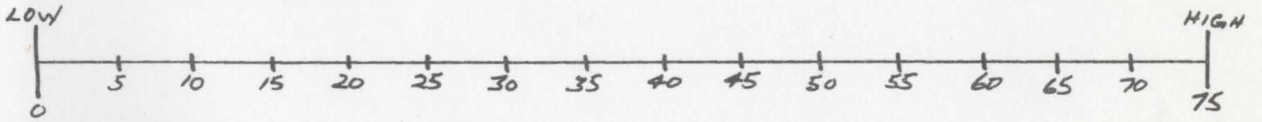
   (a) Reading



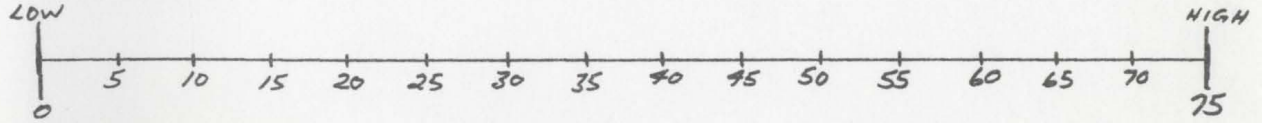
   (b) Mathematics



   (c) Social Studies

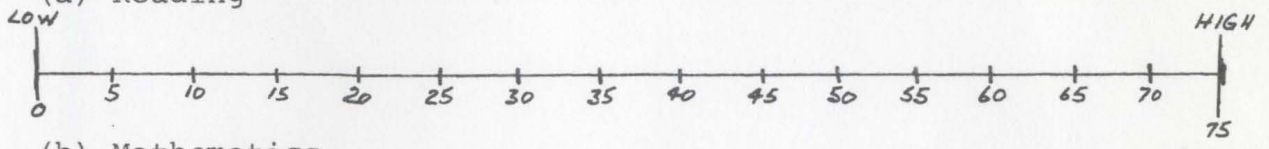


   (d) Science

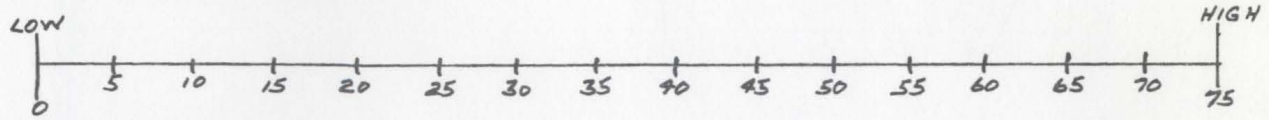


3. Suppose that there are 75 children in your child's present grade. Where do you think his achievement will rank at the end of the 1972-73 school year?

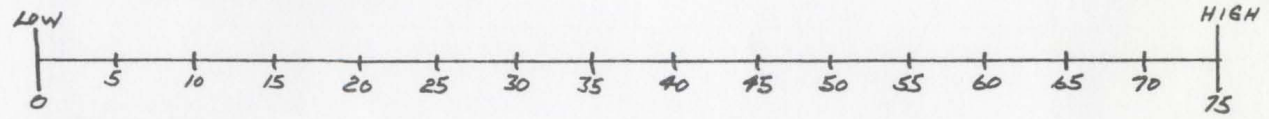
(a) Reading



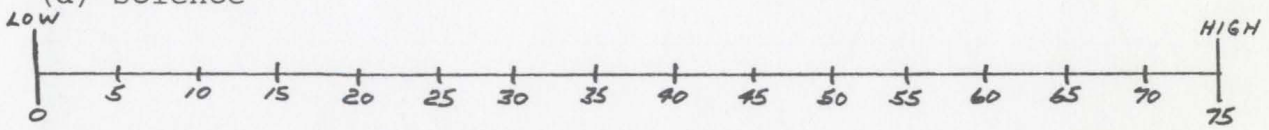
(b) Mathematics



(c) Social Studies

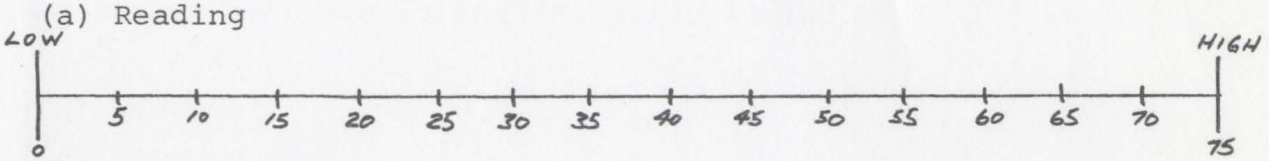


(d) Science

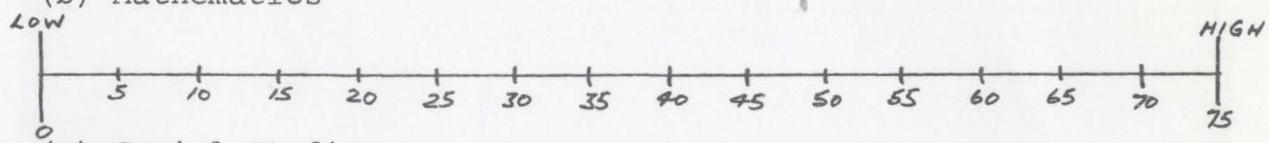


4. Suppose that in your child's first year of high school there are 75 students in his grade. How well do you think he will be achieving in the following subjects?

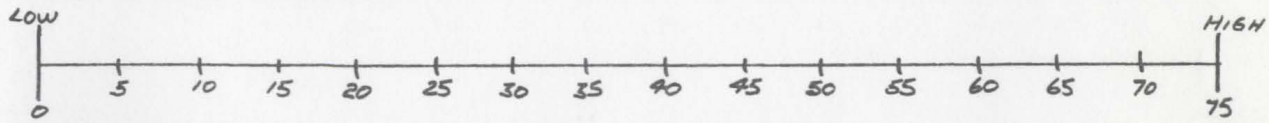
(a) Reading



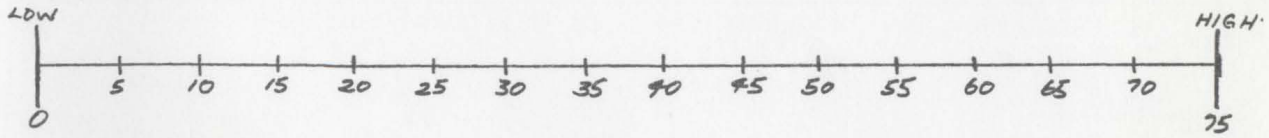
(b) Mathematics



(c) Social Studies

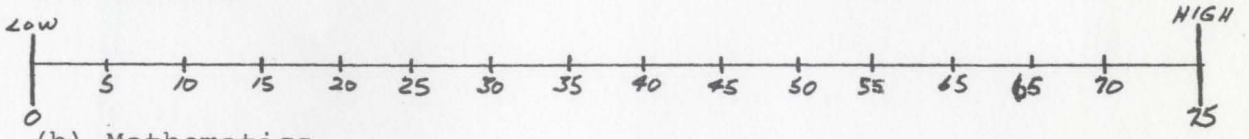


(d) Science

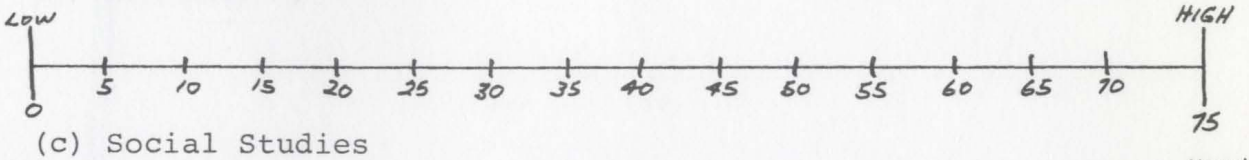


5. Suppose that your child is in his final year of high school. There are 75 children in his grade. How would you rank his achievement in the following subjects?

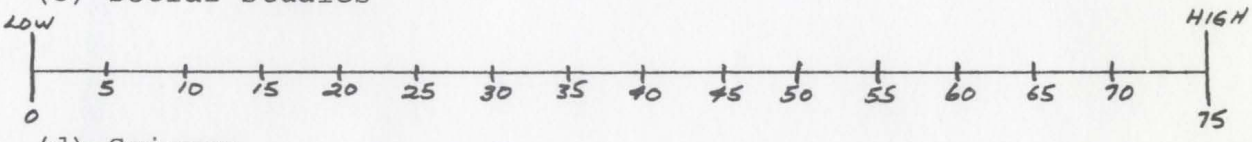
(a) Reading



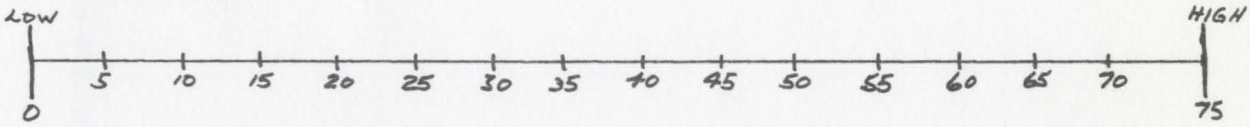
(b) Mathematics



(c) Social Studies



(d) Science



6. What level of education do you expect your child to achieve?

_____

_____

7. Based on your present knowledge of your child's interest and abilities, list one or more occupations that you think he will be best suited for as an adult.

_____

_____

_____

_____

Box 32, Education Building
Memorial University of Newfoundland
St. John's, Newfoundland
January 26, 1973

Dear

As you will recall I have seen your son at the Learning Center, Memorial University, for an assessment of his learning ability.

At the present time, I am doing my thesis for a Master's degree in Educational Psychology at Memorial University. My thesis is concerned with evaluating expectations for children who have difficulty learning to read.

It would be greatly appreciated if you would complete the enclosed questionnaire and return it to me as soon as possible.

Although your child's name is on the questionnaire, all replies will be held in the strictest confidence.

Thank you very much for helping me in this matter.

Sincerely,

Paula Barnsley

Box 32, Education Building
Memorial University of Newfoundland
St. John's, Newfoundland
January 26, 1973

Dear Parent:

My name is Paula Barnsley. I am working at the Learning Center, Memorial University. It is my job to assess children who have difficulty learning to read and to make suggestions as to how their difficulty in this area can be overcome. I am also completing my Master's degree in Educational Psychology at Memorial University. At the present time I am doing a thesis which evaluates the expectations of parents for children with reading disabilities. In order to complete this project, I need a group of children who have no difficulty learning to read. This is called a Control group and is used for comparison purposes.

The name of your child has been randomly selected from the names of all children in his grade at Vanier Elementary School. A number of children who were chosen in this way will form my Control group.

I would greatly appreciate it if you would complete the enclosed questionnaire and return it as soon as possible.

Although your child's name appears on the questionnaire, all replies will be held in the strictest confidence.

Thank you very much for helping me in this matter.

Sincerely,

Paula Barnsley

APPENDIX B

Included in Appendix B is a summary of the control variables for the Experimental and Control subjects.

Control Group

Number	Age (in Mos.)	Grade	Peabody IQ
1	86	2	110
2	98	2	120
3	88	2	108
4	86	2	101
5	94	2	116
6	95	2	111
7	91	2	104
8	85	2	137
9	89	2	120
10	89	2	112
11	87	2	116
12	106	3	122
13	105	3	119
14	102	3	108
15	106	3	113
16	104	3	128
17	102	3	113
18	106	3	128
19	107	3	111
20	111	3	106
21	104	3	118
22	112	4	119
23	117	4	127
24	117	4	109
25	121	4	105
26	111	4	116
27	111	4	131
28	112	4	114
29	117	4	116
30	123	5	109

Appendix B (Cont. 1)

Experimental Group 1

Number	Age (in Mos.)	Grade	Peabody IQ
31	991	2	108
32	94	2	89*
33	92	2	105
34	91	2	133
35	94	2	106
36	98	3	100
37	102	3	88*
38	109	33	111
39	111	4	126
40	110	4	100
41	112	4	118
42	130	4	112
43	117	4	95
44	112	4	95
45	120	4	70*
46	111	4	114
47	118	4	113

* These children have average Wechsler Performance IQ's.

Number	WISC IQ
32	96
37	96
45	97

Appendix B (Cont. 2)

Experimental Group 2

Number	Age (in Mos.)	Grade	Peabody IQ
48	90	2	89*
49	98	2	85*
50	96	2	102
51	89	2	102
53	119	3	121
54	98	3	120
55	121	3	101
56	96	3	91*
57	113	3	114
58	97	3	109
59	120	4	109
60	113	4	102

* These children have average Wechsler Performance IQ's.

Number	WISC IQ
48	97
49	94
56	120